

PATENT
IBM Docket No. POU920020098US2
Serial No. 10/812,694

Amendments to the Claims

Claim 1 (Canceled)

Claim 2 (Canceled)

Claim 3 (Canceled).

Claim 4 (Currently amended). [The method of claim 3, further comprising:] A method of constructing an air/water cooled rack mounted electronics apparatus comprising:

providing a rack unit including a plurality of removable drawer units each containing an electronic unit, each removable unit having an air-moving device for directing air through the drawer unit, said drawers and said rack having front and rear airflow openings;

mounting a sub-frame on a side of said rack, said rack and said sub-frame forming an extended frame assembly, said sub-frame including an air-to-liquid heat exchanger at an oblique angle to the removable drawer units, and providing at least one auxiliary air moving device within said sub-frame;

coupling a front cover to said extended frame assembly so that said front cover can be swung open to reveal the front of the drawer units, said front cover in airflow communication with said rack front opening and said sub-frame when said front cover is in a closed position, and providing a plurality of vent panels within said front cover; and

coupling a back cover to said extended frame assembly so that said back cover can be swung open to reveal the back of the drawer units, said back cover in airflow

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communication with said rack rear opening and said sub-frame when said back cover is in a closed position;

whereby a closed air flow loop is created by the drawer units, back cover, sub-frame, and front cover and said providing, mounting, and coupling are performed at an existing rack installation; and

providing an automatic latch mechanism having an over-temperature condition trigger.

Claim 5 (Currently amended). [The method of claim 3, further comprising:] A method of constructing an air/water cooled rack mounted electronics apparatus comprising:

providing a rack unit including a plurality of removable drawer units each containing an electronic unit, each removable unit having an air-moving device for directing air through the drawer unit, said drawers and said rack having front and rear airflow openings;

mounting a sub-frame on a side of said rack, said rack and said sub-frame forming an extended frame assembly, said sub-frame including an air-to-liquid heat exchanger at an oblique angle to the removable drawer units, and providing at least one auxiliary air moving device within said sub-frame;

coupling a front cover to said extended frame assembly so that said front cover can be swung open to reveal the front of the drawer units, said front cover in airflow communication with said rack front opening and said sub-frame when said front cover is in a closed position; and

coupling a back cover to said extended frame assembly so that said back cover can be swung open to reveal the back of the drawer units, said back cover in airflow

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communication with said rack rear opening and said sub-frame when said back cover is in a closed position, and providing a plurality of vent panels within said back cover; and

whereby a closed air flow loop is created by the drawer units, back cover, sub-frame, and front cover and said providing, mounting, and coupling are performed at an existing rack installation; and

providing an automatic latch mechanism having an over-temperature condition trigger.

Claim 6 (Canceled)

Claim 7 (Canceled)

Claim 8 (Currently amended). [The method of claim 7, further comprising] A method of constructing an air/water cooled rack mounted electronics apparatus comprising:

providing a rack unit including a plurality of removable drawer units each containing an electronic unit, each removable unit having an air-moving device for directing air through the drawer unit, said drawers and said rack having front and rear airflow openings;

mounting a sub-frame on a side of said rack, said rack and said sub-frame forming an extended frame assembly, said sub-frame including an air-to-liquid heat exchanger at an oblique angle to the removable drawer units;

coupling a front cover to said extended frame assembly so that said front cover can be swung open to reveal the front of the drawer units, said front cover in

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airflow communication with said rack front opening and said sub-frame when said front cover is in a closed position;

coupling a back cover to said extended frame assembly so that said back cover can be swung open to reveal the back of the drawer units, said back cover in airflow communication with said rack rear opening and said sub-frame when said back cover is in a closed position;

whereby a closed air flow loop is created by the drawer units, back cover, sub-frame, and front cover; and

whereby said coupling a front cover comprises hinging said front cover at one corner of said extended frame assembly; and said coupling a back cover comprises hinging said back cover at an opposing corner of said extended frame assembly; and

providing an automatic latch mechanism having an over-temperature condition trigger, said mechanism allowing said front and back covers to open upon occurrence of an over-temperature condition.

Claim 9 (Original) The method of claim 8, further comprising:

providing a retaining member connecting said front cover to said extended frame assembly;

providing a retaining member connecting said back cover to said extended frame assembly; and

wherein said retaining members prevent said front and back from opening completely.

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Claim 10 (Canceled)

Claim 11 (Canceled)